WHAT IS CLAIMED IS:

1.   A coding apparatus for coding first pictures, that are set at a predetermined interval, to be used as reference pictures for inter-picture prediction of an incoming moving picture and coding second pictures different from the first pictures, the apparatus comprising:

an encoder to encode the first pictures by intra-picture coding or unidirectional inter-picture predictive coding, and to encode the second pictures by bidirectional inter-picture predictive coding using the first pictures or locally-decoded pictures of the first pictures as the reference pictures, thus obtaining a moving-picture bitstream;

a motion amount detector to obtain motion activity on the incoming moving picture; and

a multiplexer to multiplex the moving-picture bitstream and the information of motion activity.

2.   A bitstream conversion apparatus for converting an incoming first moving-picture bitstream at a first code transfer rate to a second moving-picture bitstream at a second code transfer rate, the incoming first moving-picture bitstream having been obtained by coding first pictures set at a predetermined interval and used as reference pictures for inter-picture prediction of a moving picture to be coded and coding second pictures different from the first pictures, the apparatus comprising:

a motion amount detector to obtain motion activity on the incoming first moving-picture bitstream;

a decimation controller to set a decimation rate on the second pictures of the incoming first moving-picture bitstream according to at least the motion activity; and

a bitstream decimator to decimate only bitstreams of the second pictures from the incoming first moving-picture bitstream at another predetermined interval according to the decimation rate.

3.   A bitstream multiplexing apparatus for multiplexing a

plurality of incoming first moving-picture bitstreams into a moving-picture bitstream at a bit rate lower than a total bit rate of the incoming first moving-picture bitstreams, each incoming first moving-picture bitstream having first moving-picture bitstreams of first pictures used as reference pictures for inter-picture prediction and bitstreams of second pictures other than the first pictures, the apparatus comprising:

a decimation controller to set a decimation rate on the second pictures of the incoming first moving-picture bitstreams according to virtual buffer occupancy to the multiplexed moving-picture bitstream;

a bitstream decimator to decimate the bitstreams of the second pictures from the incoming first moving-picture bitstreams at a predetermined interval according to the decimation rate, thus obtaining second bitstreams;

a multiplexer to multiplex the second bitstreams to obtain the multiplexed bitstream; and

virtual buffer means for obtaining a code amount of the multiplexed bitstream for each reproduction period as the virtual buffer occupancy.

4.   The bitstream multiplexing apparatus according to claim 3, further comprising a motion amount detector to obtain motion activity on each incoming first moving-picture bitstream, the motion activity being used for setting the decimation rate.

5.   A method of coding first pictures, that are set at a predetermined interval, to be used as reference pictures for inter-picture prediction of an incoming moving picture and coding second pictures different from the first pictures, the method comprising the steps of:

encoding the first pictures by intra-picture coding or unidirectional inter-picture predictive coding, and to encode the second pictures by bidirectional inter-picture predictive coding using the first pictures or locally-decoded pictures of the first pictures as the reference pictures, thus obtaining a moving-picture bitstream;

obtaining motion activity on the incoming moving picture;
and

multiplexing the moving-picture bitstream and the information of motion activity.

6. A method of converting an incoming first moving-picture bitstream at a first code transfer rate to a second moving-picture bitstream at a second code transfer rate, the incoming first moving-picture bitstream having been obtained by coding first pictures set at a predetermined interval and used as reference pictures for inter-picture prediction of a moving picture to be coded and coding second pictures different from the first pictures, the method comprising the steps of:

obtaining motion activity on the incoming first moving-picture bitstream;

setting a decimation rate on the second pictures of the incoming first moving-picture bitstream according to at least the motion activity; and

decimating only bitstreams of the second pictures from the incoming first moving-picture bitstream at another predetermined interval according to the decimation rate.

7. A method of multiplexing a plurality of incoming first moving-picture bitstreams into a moving-picture bitstream at a bit rate lower than a total bit rate of the incoming first moving-picture bitstreams, each incoming first moving-picture bitstream having first moving-picture bitstreams of first pictures used as reference pictures for inter-picture prediction and bitstreams of second pictures other than the first pictures, the method comprising the steps of:

obtaining a code amount of the multiplexed bitstream for each reproduction period as virtual buffer occupancy;

setting a decimation rate on the second pictures of the incoming first moving-picture bitstreams according to the virtual buffer occupancy;

decimating the bitstreams of the second pictures from the incoming first moving-picture bitstreams at a predetermined

interval according to the decimation rate, thus obtaining second bitstreams; and

multiplexing the second bitstreams to obtain the multiplexed bitstream.

8.   The multiplexing method according to claim 7, further comprising the step of obtaining motion activity on each incoming first moving-picture bitstream, the motion activity being used for setting the decimation rate.